

**REMARKS**

The Final Office Action mailed August 26, 2004, has been received and reviewed. Claims 9 through 18, 20 through 23, and 42 through 50 are currently pending in the application. Claims 42 through 50 have been withdrawn from consideration as being drawn to non-elected invention(s). However, Applicant notes that upon allowance of independent claim 9, (a generic claim), withdrawn claims depending directly or indirectly therefrom in any non-elected species would also be allowable.

Claims 9 through 18 and 20 through 23 stand rejected. Although claim 15 stands rejected, the indication of allowable subject matter in such claim is noted with appreciation.

Applicant proposes to amend claims 9, 11, 15, 22, 23, 42, 44, 47, 48, and 50.

Particularly, Applicant proposes to amend withdrawn claims 42, 44, 47, 48, and 50 because, upon allowance of a generic claim, withdrawn claims depending directly or indirectly therefrom in any non-elected species would also be allowable. Therefore, Applicant respectfully requests entry of the proposed amendments to withdrawn claims 42, 44, 47, 48, and 50.

The proposed amendments to claims 11, 15, 22, 23 and withdrawn claims 42, 44, 47, and 48 are solely to enhance antecedent basis and do not surrender, or otherwise affect, the scope of the claims in their prior forms.

Applicant respectfully requests reconsideration of the application as proposed to be amended herein.

**35 U.S.C. § 112 Claim Rejections**

Claims 9 through 18 and 20 through 23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant appreciates the language suggested by the Examiner for overcoming the indefiniteness rejection. However, Applicant has amended independent claim 9 using other, different language than suggested by the Examiner and respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph rejection. Further, Applicant does not acquiesce to the description of the elements of independent claim 9 found in the Office Action.

### 35 U.S.C. § 102(e) Anticipation Rejections

#### Anticipation Rejection Based on U.S. Patent No. 6,229,320 to Haseyama et al.

Claims 9, 11, 12, 14, 16, 18, and 20 through 22 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,229,320 to Haseyama et al. (hereinafter “Haseyama”).

For clarity, Applicant addresses the obviousness rejection with respect to Haseyama, as well as the other obviousness rejections, in a separate section of the response set forth hereinbelow.

Applicant respectfully traverses the anticipation rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). *See also* M.P.E.P. § 2131.

Haseyama describes IC socket embodiments 200, 20-20D for mounting on a test board 32. The IC sockets have contact units 23-23B including a plurality of contact pins 30 for engaging solder bumps 28 on an IC device 25. In the different embodiments of Haseyama, contact units 23-23B may include various features such as elastic member 31, 31A, positioning plate 36 with recesses 38, positioning parts 52A, 53A or guide plates 41 and 42 for retaining contact pins 30 and positioning of solder bumps 28 (Figs. 7-19). Haseyama further describes that contact pins 30 may have a spiral part 63 for contacting solder bumps 28 (Figs. 21A-21B and Col. 15, lines 31-53). The opposite ends of contact pins 30 pass out of the underside of the socket body 21 and are configured to connect to land parts 33 on test board 32, or in the alternative, to have elastically deformable parts 71, 72, 73 inserted into through holes 70 in test board 32.

Applicant notes with appreciation the level of detail in the Office Action regarding the specific elements of the prior art that are relied upon in making the rejection.

In summary, it appears that the Office Action rejection suggests that structure used in rejecting independent claim 9 includes a longitudinal “stack” of both the socket body 21 including a substrate (e.g., 31, 31A, 41, and 42) and the test board 32 (FIGS. 24A-24C) wherein the contact pins 30 extending through both the substrate (e.g., 31, 31A, 41, and 42) and into the test board 32 in combination with other features from FIGS. 9, 13B, 14B, 21A, 21B, and 22B.

One question as to the construction of the rejection is whether or not the test board 32 is included in the so-called “one-piece” substrate. In some instances, the Office Action refers to one-piece substrate as only elements 31, 31A, 41, and 42. Page 5, Office Action. However, on page 6 of the Office Action, FIGS. 24A-24C are relied upon for disclosing the retaining portion of the aperture. Therefore, it is assumed for the purposes of this response that the test board 32 is included by (i.e., forms) the one-piece substrate unless noted otherwise.

With regard to anticipation of the present invention, the Applicant respectfully asserts that Haseyama does not identically describe each and every element of independent claim 9.

For instance, Claim 9, as presently amended, recites, *inter alia*, “a one-piece substrate bounded by a first surface and an opposing, second surface and having at least one conductive trace, wherein the first surface is configured for mounting a plurality of IC packages thereto.”

Applicant respectfully submits that Haseyama describes that an individual semiconductor device package of a plurality of semiconductor device packages is tested on *an IC socket*. See FIGS. 6, 7, 10, 13A, and 14B. Therefore, Applicant respectfully submits that Haseyama does not describe a surface configured for mounting a plurality of IC packages thereto.

Applicant notes that Haseyama does not illustrate or identically describe in detail an embodiment which combines the features shown in FIGS. 14B (i.e., relied upon for disclosing a seat portion 53A) with the features shown in FIGS. 24A-24C (i.e., relied upon for disclosing a generally uncoiled base portion) and further with the features shown in FIG. 21A and 21B (impliedly relied upon for disclosing a compressible coil spring) and yet further with the features shown in FIG. 22B (i.e., relied upon for disclosing a plurality of coils comprising the compressible coil spring as shown in FIGS. 21A and 21B). Therefore, Applicant respectfully asserts that the elements, as disclosed by Haseyama, are not arranged as required by the claim.

Further, independent claim 9, as presently amended, also recites, *inter alia*, “an aperture including a seat portion forming an opening onto the first surface of the one-piece substrate and a

retaining portion having a substantially uniform diameter and a first end connected to an opposing end of the seat portion and a second end extending at least partially into the one-piece substrate, wherein an area of the substantially uniform diameter of the retaining portion is smaller than an area of the opening of the seat portion at the first surface of the one-piece substrate.”

For clarity, the aperture of Haseyama would extend from a seat portion (formed in a first substrate) through the first substrate (e.g., 31, 31A, 41, and 42) and into the test board 32 (FIGS. 24A-24C). Applicant respectfully submits that such a configuration does not disclose an aperture as claimed in independent claim 9. Particularly, the retaining portion would not have a substantially uniform diameter extending from the seat portion. Rather, Haseyama discloses that the retaining portion would include a first size extending through the first substrate and another, different size extending into the test board. Therefore, it is clear that Haseyama does not identically describe each and every element of the claim in as complete detail as is contained therein.

In addition, independent claim 9 recites, *inter alia*, “the seat portion of the aperture sized and configured to at least partially contain the contact portion of the spring contact and longitudinally support the coils of the coil spring during compression thereof.”

Applicant asserts that Haseyama does not identically describe a seat portion sized and configured to at least partially contain the contact portion of the spring contact and support the coils of the coil spring during compression thereof.

Applicant respectfully submits that Haseyama discloses that bump positioning part 53A is for positioning the bumps 28 and establishing an electrical connection between the contact pins 30 and the solder bumps 28, wherein the contact pins 30 are configured for piercing a solder bump 28. Col. 11, lines 59-61.

For instance, the Office Action cites bump positioning part 53A, as shown in FIG. 14B, as disclosing a seat portion “sized and configured to at least partially contain the contact portion 63 of the spring contact 63 and support the coils of the coil spring during compression thereof (FIGS. 9, 13B, 14B)”. Page 5, Office Action. However, with respect to FIG. 14B, bump positioning part 53A, Applicant respectfully submits that bump positioning part 53A is not described by Haseyama as being sized and configured to at least partially contain the contact portion of a spring contact and support the coils of the coil spring during compression thereof.

No compressed spring contact is shown in FIG. 14B, nor is one described in Haseyama with respect to FIG. 14B. No positioning of a compressed spring is shown or disclosed with respect to bump positioning part 53A. Applicant respectfully asserts that because Haseyama does not show or describe a plurality of compressed coils even positioned at least partially within a seat portion, an anticipation rejection of independent claim 9 is untenable.

Similarly, FIGS. 21A and 21B do not show spiral part 63, randomly deformed part 64, or coil part 65 positioned at least partially within a seat portion during compression or otherwise, nor is such a configuration described by Haseyama. Therefore, none of FIGS. 14B, 21A or 21B show the purported structure that is used to reject independent claim 9. Further, Applicant respectfully asserts that no express description of any such structure is found within Haseyama. Rather, Applicant respectfully asserts that such a configuration is only found in the Office Action and is a selectively tailored and purely hypothetical combination of FIGS. 9, 13B, 14B and FIGS. 21A/21B.

As a further complication, independent claim 9 recites, *inter alia*, that the “retaining portion of the aperture configured to receive and electrically connect the generally uncoiled base portion of the spring contact to the at least one conductive trace.” Yet in FIG. 16 of Haseyama, the conductive pins 30 are already connected to the conductive traces 48, without the retaining portion as shown in FIGS. 24A-24C. Applicant respectfully asserts that it does not appear that Haseyama discloses an electrical connection between through holes 70 as shown in FIGS. 24A-24C and conductive traces 48 as shown in FIG. 16. Rather, FIG. 15 shows the configuration for electrical connection between conductive traces 48 and a test board 32 that is disclosed by Haseyama.

Therefore, it is respectfully asserted that the disclosure of Haseyama is unsuitable for use in an anticipation rejection of independent claim 9 because it does not identically describe each and every element of the claim in as complete detail as is contained therein to anticipate the claimed invention. Further, Haseyama does not disclose the elements are arranged as required by the claim. Rather, the Office Action combines and arranges selective and different features of Haseyama to form a hypothetical structure that is used to reject the present claims.

Furthermore, independent claim 9 recites a “one-piece substrate.” Since the Office Action relies upon **both a first substrate** (e.g., 31, 31A, 41, and 42) **and a test board** 32 (FIGS. 24A-24C), Applicant asserts that such a configuration does not anticipate independent claim 9.

Thus, Applicant respectfully asserts that Haseyama does not describe each and every element of independent claim 9 in as complete detail as is contained therein to anticipate the claimed invention under 35 U.S.C. § 102.

Accordingly, Applicant respectfully requests withdrawal of the anticipation rejection under 35 U.S.C. § 102. Further, Applicant respectfully requests reconsideration and allowance of independent claim 9.

Dependent claim 11 recites, *inter alia*, “a layer of conductive material disposed on at least a portion of an interior wall of the aperture, the layer of conductive material electrically connecting the base portion of the spring contact to the at least one conductive trace.”

For clarity, summarizing, the rejection uses the through holes 70 as shown in FIGS. 24A-24C as electrically connecting the base portion of the spring contact to the at least one conductive trace 48.

However, as pointed out above, FIG. 16 of Haseyama discloses that the conductive pins 30 are already connected to the conductive traces 48, without the retaining portion as shown in FIGS. 24A-24C. Therefore, Applicant points out that it does not appear that Haseyama discloses the arrangement as required by the claim.

Applicant respectfully submits that it appears that isolated portions of the disclosure of Haseyama are being combined (by the Office Action) in selective configurations for rejecting the claims of the present invention. Applicant respectfully suggests that such selective combination and alteration of the disclosure of Haseyama does not properly support an anticipation rejection of claim 11.

Further, dependent claim 11 is allowable as depending from independent claim 9, which is allowable.

Therefore, Applicant respectfully requests reconsideration and allowance of dependent claim 11.

Dependent claim 12 is allowable as depending from independent claim 9, which is allowable. Applicant respectfully requests reconsideration and allowance of dependent claim 12.

Dependent claim 14, as presently amended, recites, *inter alia*, that “the retaining portion of the aperture extends through the one-piece substrate and opens onto the opposing, second surface of the one-piece substrate and the at least one conductive trace is formed on the opposing, second surface of the one-piece substrate.”

Since the test board 32 is assumed to be included by the one-piece substrate, it is clearly appreciated that the conductive traces 48 formed onto lower guide plate 42, as referenced by the Office Action, are not arranged as required by the claim. Rather, conductive traces 48 would be formed within the one-piece substrate (i.e., between first substrate 31, 31A, 41, and 42 and test board 32) and not upon an opposing second surface thereof as required by the claim.

In addition, dependent claim 14 is allowable as depending from independent claim 9, which is allowable. Accordingly, Applicant respectfully requests reconsideration and allowance of dependent claim 14.

Dependent claims 16, 18, 20 and 21 are each allowable as depending from independent claim 9, which is allowable. Additionally, dependent claims 16 and 18 are allowable as depending from dependent claim 15, which is indicated to contain allowable subject matter. Applicant respectfully requests reconsideration and allowance of each of dependent claims 16, 18, 20, and 21.

Dependent claim 22 recites, *inter alia*, “the seat portion is further configured to at least partially align the lead element of the IC device relative to the spring contact.”

As noted above, Haseyama does not describe that bump positioning part 53A is sized and configured to at least partially contain the contact portion of a spring contact and support the coils of the coil spring during compression thereof. Similarly, Applicant respectfully submits that Haseyama does not describe a seat portion configured to at least partially align the lead element of the IC device relative to the spring contact, because none such structure or configuration is illustrated or described by Haseyama.

Further, dependent claim 22 is allowable as depending from independent claim 9, which is allowable.

Accordingly, Applicant respectfully requests reconsideration and allowance of dependent claim 22.

Anticipation Rejection Based on U.S. Patent Application Publication No. 2002/0060579 A1 to Haseyama et al. in View of Applicant's Admitted Prior Art (APA)

Claims 9, 10, 13, 16, and 17 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Application Publication No. 2002/0060579 A1 to Haseyama et al. (hereinafter "the Haseyama Application") in view of Applicant's admitted prior art (APA).

For clarity, Applicant addresses the obviousness rejection with respect to the Haseyama Application, as well as the other obviousness rejections, in a separate section of the response set forth hereinbelow.

Applicant respectfully traverses the anticipation rejection, as hereinafter set forth.

The Haseyama Application describes an electrical connecting device 18 for electrical connection to an IC package. The connecting device 18 includes contactors 10, a guide plate 20, screws 22, screw stoppers 23, and a substrate 24 (Figs. 5A and 5B and ¶ [0037]). Contactors 10 comprise an elongated conductive member 11 provided within a coil-shaped spring 12 (Figs. 3A-4F). External electrodes 31, 61 of an IC package 30, 60 interface with contactors 10 on one side of guide plate 20, and land patterns 25 on substrate 24 interface with contactors 10 on the opposite side of guide plate 20. Wiring 26 provides a connection between land patterns 25 to test equipment 49 (Figs. 5B, 6-8, and 10).

As mentioned above, independent claim 9 recites a "one-piece substrate." Since the Office Action relies upon **both of a guide plate** (e.g., 20) **and a substrate** 24 (FIGS. 5A, 5B), Applicant asserts that such a configuration does not properly support an anticipation rejection of independent claim 9.

The Office Action states that the Haseyama Application does not teach that the first surface is configured to hold plural integrated circuit devices. Page 11, Office Action. Thus, the Office Action further relies upon admitted prior art (APA) in the rejection of independent claim 9.

Applicant respectfully asserts that it is improper, in this case, to combine teachings from separate references in an anticipation rejection. *See* M.P.E.P. § 2131.02. Therefore, at least for this reason, the anticipation rejection of independent claim should be withdrawn or a reason for



maintaining the anticipation rejection using multiple references in accordance with M.P.E.P. § 2131.02 should be given.

Independent claim 9, as presently amended, recites, *inter alia*, “a spring contact including a generally uncoiled base portion and a contact portion longitudinally adjacent thereto” and “the base portion extending generally longitudinally from the contact portion and transversely to the coils of the coil spring.”

Applicant respectfully asserts that the Haseyama Application does not disclose each and every element of the claim in as complete detail as is contained therein and that the elements are arranged as required by the claim.

Rather, the Haseyama Application discloses in FIGS. 4A-4F that a longitudinally extending member 11A-11F may extend within or alongside the contact portion 12 and not longitudinally adjacent and longitudinally from the contact portion, as recited by the claim.

Further, independent claim 9, as presently amended, recites, *inter alia*, “an area of the substantially uniform diameter of the retaining portion is smaller than an area of the opening of the seat portion at the first surface of the one-piece substrate, the seat portion of the aperture sized and configured to at least partially contain the contact portion of the spring contact and longitudinally support the coils of the coil spring during compression thereof.”

Applicant respectfully asserts that the Haseyama Application does not disclose each and every element of the claim in as complete detail as is contained therein.

Accordingly, Applicant respectfully asserts that the Haseyama Application fails to identically describe the claim limitations of independent claim 9 as required under 35 U.S.C. § 102(e).

Dependent claim 10 recites, *inter alia*, “wherein the second end of the retaining portion does not extend entirely through the one-piece substrate to the opposing, second surface.”

Applicant respectfully asserts that since the Office Action relies upon **both of a guide plate** (e.g., 20) **and a substrate** 24 (FIGS. 5A, 5B), the Haseyama Application does not anticipate dependent claim 10. Rather, the aperture extends completely through guide plate 20 and does not extend into substrate 24 whatsoever.

Further, dependent claim 10 is allowable as depending from independent claim 9, which is allowable.

Accordingly, Applicant respectfully requests reconsideration and allowance of dependent claim 10.

Dependent claim 13 is allowable as depending from independent claim 9, which is allowable.

Applicant also respectfully submits that each of claims 16 and 17 is allowable as depending from dependent claim 15, which is indicated as including allowable subject matter. Further, each of claims 16 and 17 is allowable as depending from independent claim 9, which is allowable. Accordingly, Applicant respectfully requests reconsideration and allowance of each of claims 16 and 17.

### **35 U.S.C. § 103(a) Obviousness Rejections**

#### Obviousness Rejection Based on U.S. Patent No. 6,229,320 to Haseyama et al.

Claims 9, 11, 12, 14, 16, 18, and 20 through 22 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,229,320 to Haseyama et al. Applicant respectfully traverses the obviousness rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejections of claims 9, 11, 12, 14, 16, 18, and 20 through 22 are improper because there is no motivation to combine the embodiments taught by Haseyama with one another

Claims 9, 11, 12, 14, 16, 18, and 20 through 22 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over Haseyama

et al. (U.S. Patent No. 6,229,320). Applicant respectfully traverses the obviousness rejection, as hereinafter set forth.

The teachings of Haseyama are discussed hereinabove.

As mentioned above, independent claim 9 recites a “one-piece substrate.” Applicant asserts that one of ordinary skill in the art would not form both the test board and the first substrate as a one-piece substrate.

Particularly, to do so would negate the need for the inventive mounting mechanisms of Haseyama that are shown and described in FIGS. 24A-24C as well as 25A and 25B. Furthermore, such a configuration would result in a loss of flexibility for testing of IC packages.

Additionally, one of ordinary skill in the art would not be motivated to combine the features as shown in FIG. 9, 13B, or 14B with the features shown in any of FIGS. 21A-21B, 22A-22B, because Haseyama expressly teaches that the embodiments shown in FIGS. 6-20C relate to contact pins 30 which are configured to *pierce* the solder bumps 28, while the contact pins 30 shown in FIGS. 21C-23C are configured to establish an electrical connection with the solder bumps *without* piercing the solder bumps 28. *See* Col. 15, lines 26-30. Therefore, Applicant respectfully asserts that Haseyama teaches away from the suggested combination.

Furthermore, Haseyama suggests separate structural embodiments that relate either to contact pins 30 which are directed to piercing a solder bumps or those which establish an electrical connection with the solder bumps without piercing the solder bumps, respectively.

For instance, one of ordinary skill in the art would use a bump positioning part for piercing a solder bump because such a configuration would laterally stabilize the semiconductor device during the piercing of the solder bumps. However, in the case of contact pins configured to establish an electrical connection with the solder bumps without piercing the solder bumps, one of ordinary skill in the art lateral forces would be much less. Thus, it appears that Haseyama teaches and suggests suitable, different structural configurations for different electrical contact configurations.

The Examiner is respectfully reminded that it “is improper to combine references where the references teach away from their combination.” M.P.E.P. §2145(X)(D)(2) (citing *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983)).

Further, the Office Action does not identify a motivation for the proposed combination of the embodiments shown in Haseyama. Rather, the Office Action lists the isolated features of Haseyama without identifying a reasoning for their combination.

Applicant notes that a statement that modifications of the prior art to meet the claimed invention would have been “‘well within the ordinary skill of the art at the time the claimed invention was made’ ” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000).

Additionally, Applicant respectfully reminds the Examiner that "it is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teaching of the prior art so that the claimed invention is rendered obvious . . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fritch*, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

In a further illustration of why one of ordinary skill in the art would not be motivated to combine any of the features of Haseyama as shown in FIGS. 9, 13B, or 14B with the features shown in any of FIGS. 21A-21B, 22A-22B, Applicant respectfully asserts that such a configuration would cause the contact pins taught by Haseyama for piercing respective solder balls to become unsuitable for their stated purpose or use. Stated another way, Haseyama teaches that the contact pins shown in FIGS. 6-20C are configured for piercing solder balls, while the combination employed for rejection of independent claim 9 would render the same contact pins unsuitable for their that purpose. Particularly, Applicant respectfully submits that an elastic member disposed upon the end of a contact pin would render such a contact pin unsuitable for piercing a solder ball.

Applicant respectfully reminds the Examiner that if a “proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” M.P.E.P. §2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984)).

Even assuming, *arguendo*, that the features of Haseyama were combinable, Applicant respectfully submits that Haseyama does not teach or suggest all the claim limitations of independent claim 9 as required to support a *prima facie* case of obviousness under 35 U.S.C. § 103 with regard to the claimed invention.

For example, claim 9 recites “a one-piece substrate bounded by a first surface and an opposing, second surface and having at least one conductive trace, wherein the first surface is configured for mounting a plurality of IC packages thereto.”

The Office Action indicates that Haseyama discloses “semiconductor devices” at Col. 1, lines 18-27, but Applicant respectfully submits that the mere, sole occurrence of the word “devices” within Haseyama does not teach or suggest the limitation recited in the claim. Therefore, Applicant respectfully asserts that Haseyama does not teach or suggest a surface configured for mounting a plurality of IC packages thereto.

In another example, the Office analogizes positioning holes 43 and 44 of guide plates 41 and 42 to the aperture recited in claim 9.

However, independent claim 9 recites, as presently amended, *inter alia*, “a retaining portion having a substantially uniform diameter and a first end connected to an opposing end of the seat portion and a second end extending at least partially into the one-piece substrate, wherein an area of the substantially uniform diameter of the retaining portion is smaller than an area of the opening of the seat portion at the first surface of the one-piece substrate.”

However, the aperture as proposed by the Office Action would extend from a seat portion (formed in a first substrate) through the first substrate (e.g., 31, 31A, 41, and 42) and into the test board 32 (FIGS. 24A-24C). Applicant respectfully submits that such a configuration does not disclose an aperture as claimed in independent claim 9. Particularly, the retaining portion would not have a substantially uniform diameter extending from the seat portion. Rather, Haseyama discloses that the retaining portion would include a first size extending through the first substrate and another, different size extending into the test board. Therefore, it is clear that Haseyama does not teach or suggest all the claim limitations of independent claim 9.

Accordingly, Applicant respectfully requests withdrawal of the obviousness rejection and allowance of independent claim 9.

Dependent claim 11 is allowable as depending from independent claim 9, which is allowable. Accordingly, Applicant respectfully requests reconsideration and allowance of dependent claim 11.

Dependent claim 12 recites, *inter alia*, "at least one conductive trace is formed on the first surface of the one-piece substrate." Further, independent claim 9 recites, *inter alia*, "wherein the first surface is configured for mounting a plurality of IC devices thereto." Also, it should be noted that independent claim 9 states that the seat portion forms an opening onto the first surface of the one-piece substrate.

Therefore, while the Office Action references conductive traces 48 formed onto lower guide plate 42, (which would be within the one-piece substrate constructed by the Office Action) it appears clear that guide plate 42 does not include a surface configured for mounting a plurality of IC devices thereto or that the seat portion forms an opening thereon.

Applicant asserts that the Office Action is inconsistent because claim 12 specifically states that the at least one conductive trace is formed on the first surface of the one-piece substrate and the surface of lower guide plate 42 does not meet the claimed limitations.

Applicant again respectfully submits that it appears that isolated portions of the disclosure of Haseyama have been combined (by the Office Action) in selective configurations for rejecting the claims of the present invention. Applicant respectfully reminds the Examiner that "it is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teaching of the prior art so that the claimed invention is rendered obvious . . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fritch*, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

Accordingly, Applicant respectfully submits that Haseyama does not teach or suggest all the claim limitations of dependent claim 12. Further, dependent claim 12 is allowable as depending from independent claim 9, which is allowable. Applicant respectfully requests reconsideration and allowance of dependent claim 12.

Dependent claims 14, 16, 18, 20 and 21 are each allowable as depending from independent claim 9, which is allowable. Dependent claims 16 and 18 are each allowable as depending from dependent claim 15, which is indicated as including allowable subject matter. Applicant respectfully requests reconsideration and allowance of each of dependent claims 14,

16, 18, 20 and 21.

Dependent claim 22 recites, *inter alia*, “the seat portion is further configured to at least partially align the lead element of the IC device relative to the spring contact.”

As noted above, Haseyama does not teach or suggest that bump positioning part 53A is sized and configured to at least partially contain the contact portion of a spring contact and support the coils of the coil spring during compression thereof. Similarly, Applicant respectfully submits that Haseyama does not teach or suggest a seat portion configured to at least partially align the lead element of the IC device relative to the spring contact, because none is illustrated or described by Haseyama. Rather, it appears that Haseyama teaches and suggests suitable, different structural configurations regarding different electrical contact configurations.

Also, dependent claim 22 is allowable as depending from independent claim 9, which is allowable. Accordingly, Applicant respectfully requests reconsideration and allowance of dependent claim 22.

Obviousness Rejection Based on U.S. Patent Application Publication No. 2002/0060579 A1 to Haseyama et al. in View of Applicant’s Admitted Prior Art (APA)

Claims 9, 10, 13, 16, and 17 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Application Publication No. 2002/0060579 A1 to Haseyama et al. in view of Applicant’s admitted prior art (APA). Applicant respectfully traverses the obviousness rejection, as hereinafter set forth.

The teachings of the Haseyama Application are discussed hereinabove.

Claim 9, as presently amended, recites, *inter alia*, “a one-piece substrate bounded by a first surface and an opposing, second surface and having at least one conductive trace, wherein the first surface is configured for mounting a plurality of IC packages thereto.”

Applicant respectfully submits that the Haseyama Application does not teach or suggest all the claim limitations of independent claim 9.

Particularly, as illustrated and described in the Haseyama Application, guide plate 20 is illustrated and described as being configured to receive a single IC package 30, 60 (Figs. 5A, 12, and 13A-13C). As such, no surface of guide plate 20 is configured for mounting a plurality of IC packages thereto.

Further, with regard to ¶ [0002] of the Instant Application, cited in the Office Action on page 10 thereof, Applicant respectfully submits the mere disclosure that a MCM, while including a plurality of IC devices within but one IC package, accordingly, does not disclose a first surface configured for mounting a plurality of IC packages thereto.

Accordingly, Applicant respectfully submits that the Haseyama Application in view of the admitted prior art does not teach or suggest the claim limitations of independent claim 9 to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention.

Claim 9, as presently amended, further includes a spring contact having a generally uncoiled base portion adjacent to the contact portion and extending generally longitudinally from the contact portion and transversely to the coils of the coil spring.

Coil-shaped springs 12 of the Haseyama Application, on the other hand, are illustrated as having an uncoiled portion that extends proximate to or within a coiled contact portion. Therefore, Applicant respectfully submits that the Haseyama Application does not teach or suggest a base portion as recited in claim 9.

Moreover, claim 9, as presently amended, recites, *inter alia*, “a retaining portion having a substantially uniform diameter and a first end connected to an opposing end of the seat portion and a second end extending at least partially into the one-piece substrate, wherein an area of the substantially uniform diameter of the retaining portion is smaller than an area of the opening of the seat portion at the first surface of the one-piece substrate.”

In the Haseyama Application, apertures 21 are illustrated and described as having either a uniform cylindrical shape or a narrowed structure with inwardly tapered upper and lower portions, as shown in FIGS. 5A and 5B. As such, apertures 21 do not include a retaining portion as recited by independent claim 9, as presently amended.

Accordingly, Applicant respectfully requests reconsideration and allowance of independent claim 9.

Applicant respectfully submits that claims 10 and 13 are each allowable as depending from independent claim 9, which is allowable. Accordingly, Applicant respectfully requests reconsideration and allowance of each of claims 10 and 13.



Each of claims 16 and 17 is allowable as depending from independent claim 9, which is allowable. Further, claims 16 and 17 are each allowable as depending from dependent claim 15, which is indicated as including allowable subject matter. Accordingly, Applicant respectfully requests reconsideration and allowance of each of claims 16 and 17.

Obviousness Rejection Based on U.S. Patent No. 6,229,320 to Haseyama et al. in View of U.S. Patent Application Publication No. 2002/0075025 A1 to Tanaka

Claims 13 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,229,320 to Haseyama et al. in view of U.S. Patent Application Publication No. 2002/0075025 A1 to Tanaka (hereinafter “Tanaka”). Applicant respectfully traverses this rejection, as hereinafter set forth.

Tanka teaches or suggests a semiconductor testing tool, formed with a reduced number of structural elements and allowing a high frequency test, comprising a multi-layer substrate 3 in which internal lead wires 8 are embedded. Further, a layer of silicon rubber 5 is provided at a rear side of the multi-layer substrate 3 to absorb differences in height of the contact pins 6.

The Office Action indicates that Haseyama does not disclose an intermediate conductive plane. Page 8, Office Action. However, Applicant has stated hereinabove that conductive traces 48 formed onto lower guide plate 42 would be within the one-piece substrate (assumed to include both a first substrate 31, 31A, 41, and 42 and a test board 32).

Therefore, Applicant requests clarification as to the rejection.

Dependent claim 17 is allowable as depending from dependent claim 15, which is indicated as including allowable subject matter. Further, dependent claims 13 and 17 are each allowable as depending from independent claim 9, which is allowable.

Accordingly, Applicant respectfully requests reconsideration and allowance of each of dependent claims 13 and 17.

Obviousness Rejection Based on U.S. Patent No. 6,229,320 to Haseyama et al. in View of  
Japanese Patent No. 2000-123935 to Kawaguchi

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,229,320 to Haseyama et al. in view of Japanese Patent No. 2000-123935 to Kawaguchi. Applicant respectfully traverses this rejection, as hereinafter set forth.

Dependent claim 23 is allowable as depending from independent claim 9, which is allowable. Applicant respectfully requests reconsideration and allowance of dependent claim 23.

**ENTRY OF AMENDMENTS**

The proposed amendments to claims 9, 11, 15, 22, 23, 42, 44, 47, 48, and 50 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search. Finally, if the Examiner determines that the amendments do not place the application in condition for allowance, entry is respectfully requested upon filing of a Notice of Appeal herein.

**CONCLUSION**

Claims 9 through 18, 20 through 23, and 42 through 50 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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Date: October 22, 2004  
TNB/ps:ljb  
Document in ProLaw